

WHAT IS CLAIMED IS:

1. A motorcycle comprising:
 - (a.) front and rear wheels;
 - (b.) a frame supported on and connected to the front and rear wheels, said frame including a rear swing frame pivotally connected to a front frame;
 - (c.) an engine mounted to the frame and disposed between the front and rear wheels;
 - (d.) a seat mounted to the frame; and
 - (e.) a radiator mounted to the rear swing frame and disposed between the engine and the rear wheel.
2. The motorcycle of claim 1, wherein the rear swing frame is pivotable along a pivot axis disposed perpendicular to a longitudinal axis of the motorcycle, and wherein the radiator is disposed rearward of the pivot axis.
3. The motorcycle of claim 1, wherein the radiator is disposed below the seat.
4. The motorcycle of claim 1, wherein the rear swing frame comprises:
 - a pair of side structures, each comprising a pair of upper and lower arms, wherein in each of the side structures, rear portions of the upper and lower arms are secured together at a wheel mount and forward portions of the upper and lower arms are secured to a forward mount;
 - a transverse upper cross member extending between the upper arms; and
 - a transverse lower cross member extending between the lower arms; andwherein the rear wheel is disposed between the side structures and is rotatably mounted to the wheel mounts.
5. The motorcycle of claim 4, wherein the radiator is disposed between the side structures.

6. The motorcycle of claim 5, wherein the front frame comprises:
a steering head;
a pair of spaced-apart down pipes secured to the steering head and extending downwardly and rearwardly therefrom;
a pair of bottom pipes joined at bends to bottom portions of the down pipes, respectively, and extending rearwardly therefrom; and
a pair of rear stays secured to the bottom pipes, respectively, and extending upwardly therefrom.

7. The motorcycle of claim 6, wherein the side structures of the rear swing frame are connected to the rear stays of the front frame so as to be pivotable along a pivot axis extending perpendicular to a longitudinal axis of the motorcycle, and wherein the radiator is disposed rearward of the pivot axis.

8. The motorcycle of claim 5, wherein the radiator comprises a core disposed between an inlet tank and an outlet tank, and wherein the inlet tank of the radiator is connected to the upper cross member of the swing frame.

9. The motorcycle of claim 8, wherein the outlet tank of the radiator is connected to the lower cross member of the rear swing frame.

10. The motorcycle of claim 1, further comprising an air management system comprising at least one air duct for guiding cooling air to the radiator.

11. The motorcycle of claim 10, wherein the at least one duct comprises a plurality of air ducts.

12. A motorcycle comprising:

- (a.) front and rear wheels;
- (b.) a frame supported on and connected to the front and rear wheels;
- (c.) an engine mounted to the frame and disposed between the front and rear

wheels;

(d.) a seat mounted to the frame; and

(e.) a radiator mounted to the frame and disposed between the engine and the rear wheel, said radiator being positioned such that an uppermost portion of the radiator is disposed at a lower level than an uppermost portion of the rear wheel.

13. The motorcycle of claim 12, wherein the frame comprises a rear swing frame pivotally connected to a front frame.

14. The motorcycle of claim 13, further comprising an outer fender connected to the front frame and an inner fender connected to the rear swing frame and disposed between the radiator and the rear wheel.

15. The motorcycle of claim 14, further comprising at least one fan disposed between the radiator and the inner fender.

16. The motorcycle of claim 13, wherein the rear swing frame comprises:
a pair of side structures, each comprising a pair of upper and lower arms, wherein in each of the side structures, rear portions of the upper and lower arms are secured together at a wheel mount and forward portions of the upper and lower arms are secured to the forward mount;
a transverse upper cross member extending between the upper arms; and
a transverse lower cross member extending between the lower arms; and
wherein the rear wheel is disposed between the side structures and is rotatably mounted to the wheel mounts.

17. The motorcycle of claim 16, wherein an upper portion of the radiator is connected to the upper cross member of the swing frame and a lower portion of the radiator is connected to the lower cross member of the rear swing frame.

18. A motorcycle comprising:

- (a.) front and rear wheels;
- (b.) a frame supported on and connected to the front and rear wheels;
- (c.) an engine mounted to the frame and disposed between the front and rear wheels;
- (d.) a seat mounted to the frame;
- (e.) a radiator mounted to the frame and disposed between the engine and the rear wheel; and
- (f.) a fan assembly disposed between the radiator and the rear wheel and operable to draw air from the radiator and to direct the air rearwardly toward the rear wheel.

19. The motorcycle of claim 18, further comprising inner and outer rear fenders connected to the frame, said inner rear fender being disposed between the fan assembly and the rear wheel.

20. The motorcycle of claim 19, wherein the inner and outer rear fenders cooperate to define an egress channel for guiding air from the fan assembly.

21. The motorcycle of claim 18, wherein the fan assembly is disposed below the seat.

22. The motorcycle of claim 21, wherein an uppermost portion of the radiator is disposed at a lower level than an uppermost portion of the rear wheel.

23. The motorcycle of claim 18, wherein the fan assembly is connected to the radiator.

24. The motorcycle of claim 23, wherein the fan assembly comprises a mounting structure secured to the radiator and at least one fan held by the mounting structure in a position disposed rearward and in alignment with the radiator.

25. The motorcycle of claim 24, wherein each at least one fan comprises an electric motor drivingly connected to an impeller and a shroud disposed around the impeller.

26. The motorcycle of claim 25, wherein the at least one fan comprises a plurality of fans.

27. The motorcycle of claim 18, wherein the frame comprises a rear swing frame pivotally connected to a front frame.

28. The motorcycle of claim 27, wherein the radiator is mounted to the rear swing frame.

29. The motorcycle of claim 28, wherein the swing frame is pivotable along a pivot axis disposed perpendicular to a longitudinal axis of the motorcycle, and wherein the radiator is disposed rearward of the pivot axis.

30. The motorcycle of claim 27, further comprising an outer fender connected to the front frame and an inner fender connected to the rear swing frame, said inner and outer fenders cooperating to define an air egress channel through which air from the fan assembly may flow.